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Department of M.C.A

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	5. To add two matrices. 6. To convert a month name to a number of days. 7. To check the validity of password input by users. Validation: a. At least 1 letter between [a-z] and 1 letter between [A-Z]. b. At least 1 number between [0-9]. c. At least 1 character from [$#@]. d. Minimum length 6 characters. e. Maximum length 16 characters. 8. To check if a number is palindrome or not.		
3	**To implement Python programs using List, String, Set and Dictionary.** 1. To merge two lists and find the second largest element in the list using bubble sort. 2. To calculate the no of uppercase, lowercase letters and digits in a string. 3. To count the occurrences of each word in a given string sentence. 4. To add a key value pair to the dictionary and search and then delete the given key from the dictionary. 5. Create one dictionary of 5 students with their name, address, age, class and marks of 5 subjects. Perform all the operations on the created dictionary. 6. To concatenate two dictionaries and find sum of all values in the dictionary. 7. To add and remove elements from set and perform all the set operations like Union, Intersection, Difference and Symmetric Difference. 8. Perform different operations on Tuple.		

	9. Write a Python program to count the elements in a list until an element is a tuple.		
4	**To implement programs on Python Functions and Modules.** 1. To check whether string is palindrome or not using function recursion. 2. To find Fibonacci series using recursion. 3. To find the binary equivalent of number using recursion. 4. To use lambda function on list to generate filtered list, mapped list and reduced list. 5. Convert the temperature in Celsius to Fahrenheit in list using an anonymous function. 6. To create modules in python and access functions of the module by importing it to another file/module. (Calculator program)		
5	**To implement programs on OOP Concepts in python** 1. Python Program to Create a Class and Compute the Area and the Perimeter of the Circle. 2. To Implement Multiple Inheritance in python. 3. To Implement a program with same method name and multiple arguments. 4. To Implement Operator Overloading in python. 5. Write a program which handles various exceptions in python.		
6	**To implement programs on Data Structures using Python.** 1. To Create, Traverse, Insert and remove data using Linked List. 2. Implementation of stacks. 3. Implementation of Queue.		

	4. Implementation of Dequeue.		
7	**To implement GUI programming and Database Connectivity.** 1. To Design Login Page. 2. To Design Student Information Form/Library management Form/Hospital Management Form. 3. Implement Database connectivity For Login Page i.e. Connect Login GUI with Sqlite3.		
8	**To implement Threads in Python.** 1. To do design the program for starting the thread in python. 2. Write a program to illustrate the concept of synchronization. 3. Write a program for creating a multithreaded priority queue.		
9	**To implement the NumPy library in Python.** 1. Creating ndarray objects using array() in NumPy. 2. Creating 2D arrays to implement Matrix Multiplication. 3. Program for Indexing and slicing in NumPy arrays. 4. To implement NumPy - Data Types .		
10	**To implement Pandas library in Python.** 1. Write a Pandas program to create and display a one dimensional array-like object containing an array of data using Pandas module. 2. Write a Pandas program to convert a dictionary to a Pandas series. 3. Write a Pandas program to create a dataframe from a dictionary and display it. Sample data: {'X':[78,85,96,80,86],		

	'Y':[84,94,89,83,86],'Z':[86,97,96,72,83]} 4. Write a Pandas program to aggregate the two given data frames along rows and assign all data. 5. Write a Pandas program to merge two given dataframes with different columns.		

Final Grade	Instructor Signature